

District I
1625 N. Finch Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate
District Office in accordance
with Rule 116 on back
side of form

Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company Williams Production	Contact Michael K. Lane
Address PO Box 640	Telephone No. 505-634-4219
Facility Name Rosa Water Gathering Line btw Rosa #46A (30-039-26986) & Rosa #379 (30-039-26949)	Facility Type Produced water gathering line

Surface Owner BLM	Mineral Owner BLM	Lease No.
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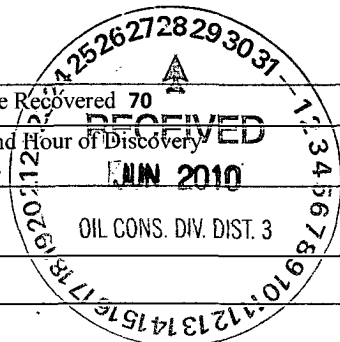
LOCATION OF RELEASE

Unit Letter O & K	Section 8	Township 31 N	Range 05	Feet from the	North/South Line	Feet from the	East/West Line	County Rio Arriba
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Latitude 36.90902 Longitude -107.38719

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 75	Volume Recovered 70
Source of Release Line break	Date and Hour of Occurrence 6/3/10 09:50	Date and Hour of Discovery Same
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Brandon Powell-NMOCD	
By Whom? Myke Lane	Date and Hour 6/4/10	
Was a Watercourse Reached? ☒ Yes ☐ No	If YES, Volume Impacting the Watercourse. <5bbl	



If a Watercourse was Impacted, Describe Fully. **Water line hit during excavation for a buried electric line. Water traveled down excavation trench to culvert. Outlet from culvert drained into small drainage traveling about 250 yards on sandstone mostly. Drainage feeds Cabresto Wash. Wash streambed not reached.**

Describe Cause of Problem and Remedial Action Taken. **Water line hit during excavation for buried electric line. Isolation valve immediately closed limiting water lost to approximately 75 bbls. Majority of water contained within excavation trench. However some water pasted thru the waddle BMP and reached a culvert draining to Cabresto Wash, and traveled approximately 250 yards before it could be dammed off with soil berms. Spill did not reach Cabresto Wash streambed. Immediately after release hydro-vacuum trucks used to recover free liquids, which were disposed of in SWD well. Impacted soils were hydro-excavated along trench and on portion of wash accessible, remaining soils were hand excavated. All soil disposed of at Envirotech Landfarm. Confirmation soil samples collected along spill area following cleanup. Copies attached.**

Describe Area Affected and Cleanup Action Taken.
See actions taken above.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature:		OIL CONSERVATION DIVISION	
Printed Name: Michael K. Lane		Approved by District Supervisor: For: CP	
Title: SJB EH&S Specialist		Approval Date: 9/22/10	Expiration Date:
E-mail Address: myke.lane@williams.com		Conditions of Approval:	
Date: 6/20/10	Phone: (505) 330-3198	Attached ☐	

• Attach Additional Sheets If Necessary

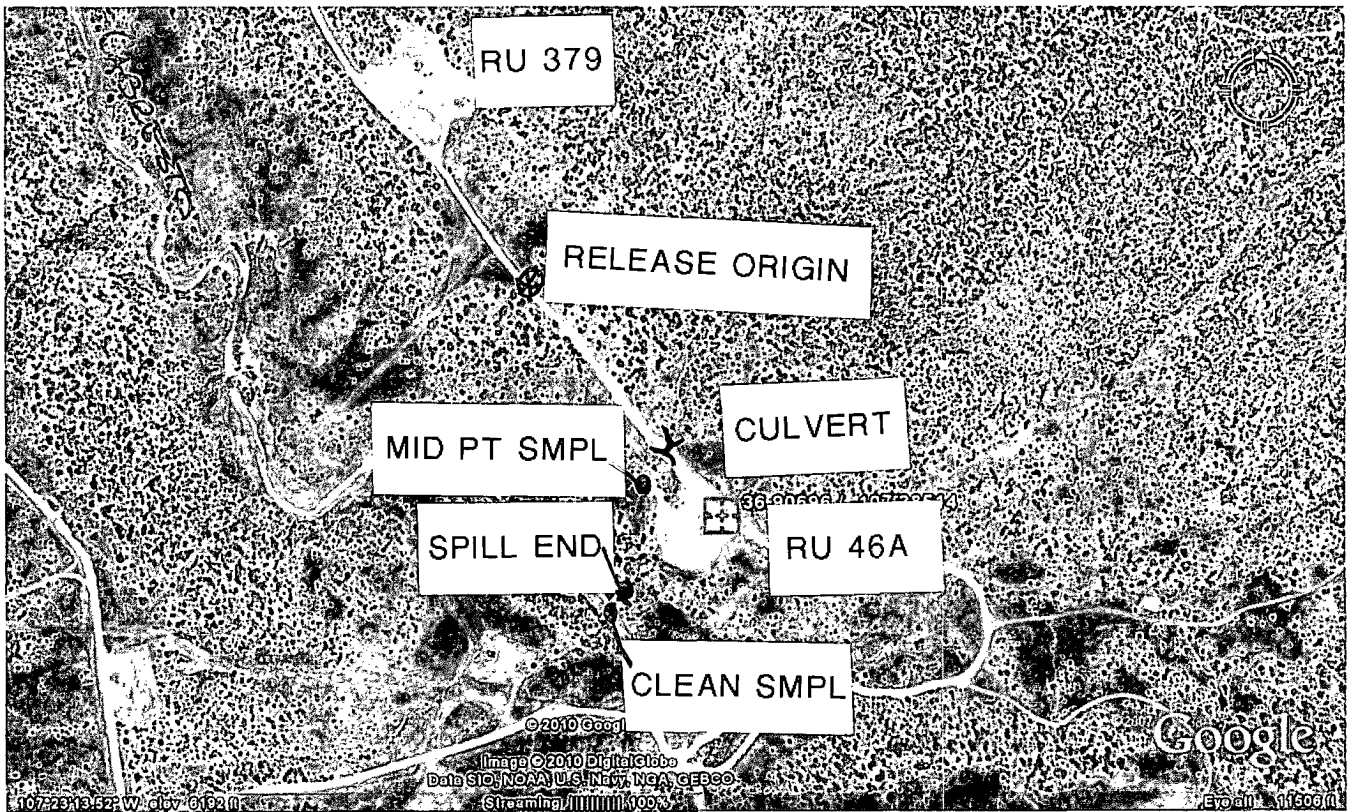
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Rosa Water Gathering Spill 6-3-10
Summary Lab Analysis

Sample ID	TPH (8015) ppm	Benzene ppb	BTEX ppb	pH su	EC umho/cm	SAR ratio
Mid Pt Spill	3.6	ND	18.8	7.12	3860	5.54
End of Spill	13.4	2.6	17.4	7.88	1160	10.1
Culvert	3.8	ND	19.5	8.68	595	5.6
Background (Clean)	11.1	ND	11.4	7.89	53.9	0.59
Cleanup Std	100	10000	50000			

Rosa Water Gathering Spill 6-3-10
Site Map





**EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons**

Client:	Williams	Project #:	04108-0136
Sample ID:	Mid Pit of Spill	Date Reported:	06-08-10
Laboratory Number:	54582	Date Sampled:	06-03-10
Chain of Custody No:	9411	Date Received:	06-04-10
Sample Matrix:	Soil	Date Extracted:	06-04-10
Preservative:	Cool	Date Analyzed:	06-05-10
Condition:	Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	3.3	0.2
Diesel Range (C10 - C28)	0.3	0.1
Total Petroleum Hydrocarbons	3.6	0.2

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Rosa Road Line Leak**

Analyst

Review



**EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons**

Client:	Williams	Project #:	04108-0136
Sample ID:	End of Spill	Date Reported:	06-08-10
Laboratory Number:	54583	Date Sampled:	06-03-10
Chain of Custody No:	9411	Date Received:	06-04-10
Sample Matrix:	Soil	Date Extracted:	06-04-10
Preservative:	Cool	Date Analyzed:	06-05-10
Condition:	Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	0.6	0.2
Diesel Range (C10 - C28)	12.8	0.1
Total Petroleum Hydrocarbons	13.4	0.2

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Rosa Road Line Leak**


Analyst


Review



**EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons**

Client:	Williams	Project #:	04108-0136
Sample ID:	Culvert	Date Reported:	06-08-10
Laboratory Number:	54584	Date Sampled:	06-03-10
Chain of Custody No:	9411	Date Received:	06-04-10
Sample Matrix:	Soil	Date Extracted:	06-04-10
Preservative:	Cool	Date Analyzed:	06-05-10
Condition:	Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	0.4	0.2
Diesel Range (C10 - C28)	3.4	0.1
Total Petroleum Hydrocarbons	3.8	0.2

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Rosa Road Line Leak**

Analyst

Review



**EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons**

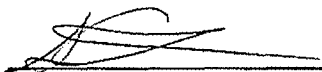
Client:	Williams	Project #:	04108-0136
Sample ID:	Clean	Date Reported:	06-08-10
Laboratory Number:	54585	Date Sampled:	06-03-10
Chain of Custody No:	9411	Date Received:	06-04-10
Sample Matrix:	Soil	Date Extracted:	06-04-10
Preservative:	Cool	Date Analyzed:	06-05-10
Condition:	Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	1.0	0.2
Diesel Range (C10 - C28)	10.1	0.1
Total Petroleum Hydrocarbons	11.1	0.2

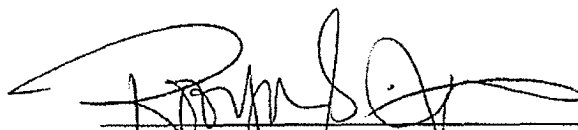
ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Rosa Road Line Leak**



Analyst



Review



EPA Method 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

Quality Assurance Report

Client:	QA/QC	Project #:	N/A
Sample ID:	06-05-10 QA/QC	Date Reported:	06-08-10
Laboratory Number:	54576	Date Sampled:	N/A
Sample Matrix:	Methylene Chloride	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	06-05-10
Condition:	N/A	Analysis Requested:	TPH

	I-Cal Date	I-Cal RF	C-Cal RF	% Difference	Accept. Range
Gasoline Range C5 - C10	05-07-07	9.9960E+002	1.0000E+003	0.04%	0 - 15%
Diesel Range C10 - C28	05-07-07	9.9960E+002	1.0000E+003	0.04%	0 - 15%

Blank Conc. (mg/L - mg/Kg)	Concentration	Detection Limit
Gasoline Range C5 - C10	ND	0.2
Diesel Range C10 - C28	ND	0.1
Total Petroleum Hydrocarbons	ND	0.2

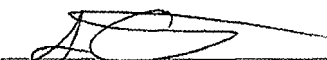
Duplicate Conc. (mg/Kg)	Sample	Duplicate	% Difference	Accept. Range
Gasoline Range C5 - C10	3.3	2.7	18.4%	0 - 30%
Diesel Range C10 - C28	ND	ND	0.0%	0 - 30%

Spike Conc. (mg/Kg)	Sample	Spike Added	Spike Result	% Recovery	Accept. Range
Gasoline Range C5 - C10	3.3	250	252	99.5%	75 - 125%
Diesel Range C10 - C28	ND	250	242	96.7%	75 - 125%

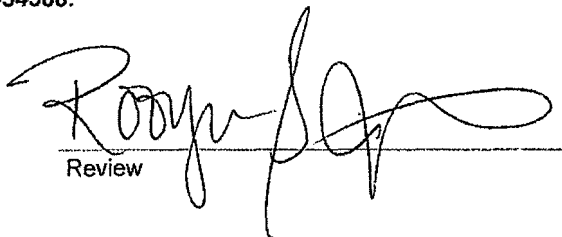
ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: QA/QC for Samples 54576-54578, 54582-54588.



Analyst



Review



EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Williams	Project #:	04108-0136
Sample ID:	Mid Pit of Spill	Date Reported:	06-08-10
Laboratory Number:	54482	Date Sampled:	06-03-10
Chain of Custody:	9411	Date Received:	06-04-10
Sample Matrix:	Soil	Date Analyzed:	06-04-10
Preservative:		Date Extracted:	06-04-10
Condition:	Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	0.9
Toluene	3.4	1.0
Ethylbenzene	3.4	1.0
p,m-Xylene	6.3	1.2
o-Xylene	5.7	0.9
Total BTEX	18.8	

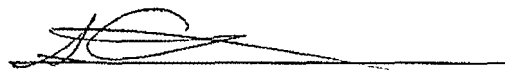
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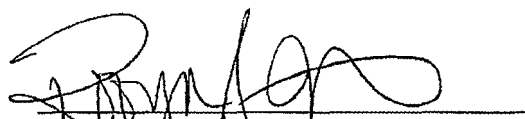
Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	117 %
	1,4-difluorobenzene	113 %
	Bromochlorobenzene	106 %

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: Rosa Road Line Leak


Analyst


Review



EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Williams	Project #:	04108-0136
Sample ID:	End of Spill	Date Reported:	06-08-10
Laboratory Number:	54483	Date Sampled:	06-03-10
Chain of Custody:	9411	Date Received:	06-04-10
Sample Matrix:	Soil	Date Analyzed:	06-04-10
Preservative:		Date Extracted:	06-04-10
Condition:	Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	2.6	0.9
Toluene	3.4	1.0
Ethylbenzene	1.5	1.0
p,m-Xylene	4.9	1.2
o-Xylene	5.0	0.9
Total BTEX	17.4	

ND - Parameter not detected at the stated detection limit.

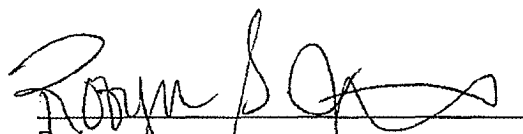
Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	106 %
	1,4-difluorobenzene	103 %
	Bromochlorobenzene	107 %

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: Rosa Road Line Leak


Analyst


Review



EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Williams	Project #:	04108-0136
Sample ID:	Culvert	Date Reported:	06-08-10
Laboratory Number:	54484	Date Sampled:	06-03-10
Chain of Custody:	9411	Date Received:	06-04-10
Sample Matrix:	Soil	Date Analyzed:	06-04-10
Preservative:		Date Extracted:	06-04-10
Condition:	Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	0.9
Toluene	2.9	1.0
Ethylbenzene	2.7	1.0
p,m-Xylene	8.1	1.2
o-Xylene	5.8	0.9
Total BTEX	19.5	

ND - Parameter not detected at the stated detection limit.

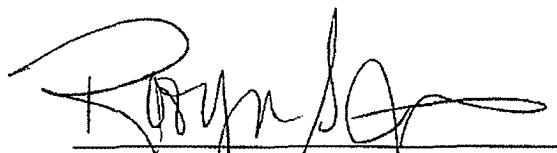
Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	104 %
	1,4-difluorobenzene	102 %
	Bromochlorobenzene	105 %

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: Rosa Road Line Leak


Analyst


Review



EPA METHOD 8021
AROMATIC VOLATILE ORGANICS

Client:	Williams	Project #:	04108-0136
Sample ID:	Clean	Date Reported:	06-08-10
Laboratory Number:	54485	Date Sampled:	06-03-10
Chain of Custody:	9411	Date Received:	06-04-10
Sample Matrix:	Soil	Date Analyzed:	06-04-10
Preservative:		Date Extracted:	06-04-10
Condition:	Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	0.9
Toluene	3.0	1.0
Ethylbenzene	1.7	1.0
p,m-Xylene	2.7	1.2
o-Xylene	4.0	0.9
Total BTEX	11.4	

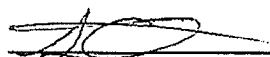
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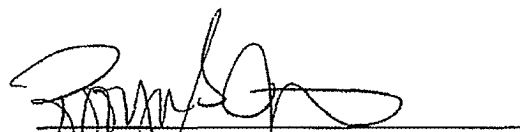
Surrogate Recoveries:	Parameter	Percent Recovery
	Fluorobenzene	104 %
	1,4-difluorobenzene	103 %
	Bromochlorobenzene	106 %

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: Rosa Road Line Leak


Analyst


Review



**EPA METHOD 8021
AROMATIC VOLATILE ORGANICS**

Client:	N/A	Project #:	N/A
Sample ID:	0604BBLK QA/QC	Date Reported:	06-08-10
Laboratory Number:	54576	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	06-04-10
Condition:	N/A	Analysis:	BTEX

Calibration and Detection Limits (ug/L)	I-Cal RF	C-Cal RF	%Diff	Blank Conc	Detect Limit
		Accept Range 0 - 15%			
Benzene	1.2613E+006	1.2638E+006	0.2%	ND	0.1
Toluene	1.1630E+006	1.1654E+006	0.2%	ND	0.1
Ethylbenzene	1.0450E+006	1.0471E+006	0.2%	ND	0.1
p,m-Xylene	2.5909E+006	2.5961E+006	0.2%	ND	0.1
o-Xylene	9.6855E+005	9.7050E+005	0.2%	ND	0.1

Duplicate Conc. (ug/Kg)	Sample	Duplicate	%Diff	Accept Range	Detect Limit
Benzene	2.6	2.4	7.7%	0 - 30%	0.9
Toluene	5.4	4.2	22.2%	0 - 30%	1.0
Ethylbenzene	3.3	2.4	27.3%	0 - 30%	1.0
p,m-Xylene	4.8	3.6	25.0%	0 - 30%	1.2
o-Xylene	3.7	2.9	21.6%	0 - 30%	0.9

Spike Conc. (ug/Kg)	Sample	Amount Spiked	Spiked Sample	%Recovery	Accept Range
Benzene	2.6	50.0	48.6	92.4%	39 - 150
Toluene	5.4	50.0	50.5	91.2%	46 - 148
Ethylbenzene	3.3	50.0	50.2	94.1%	32 - 160
p,m-Xylene	4.8	100	100	95.5%	46 - 148
o-Xylene	3.7	50.0	50.6	94.2%	46 - 148

ND - Parameter not detected at the stated detection limit.

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.
Method 8021B, Aromatic and Halogenated Volatiles by Gas Chromatography Using Photoionization and/or Electrolytic Conductivity Detectors, SW-846, USEPA December 1996.

Comments: QA/QC for Samples 54578, 54582-54585, 54576 and 54586-54588.

Analyst

Review



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Analytical Laboratory

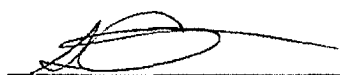
EC, SAR, pH Analysis

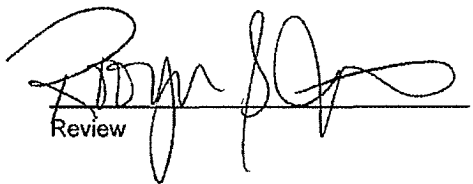
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Sample ID:	Mid Pit of Spill	Date Reported:	06-08-10
Laboratory Number:	54582	Date Sampled:	06-03-10
Chain of Custody:	9411	Date Received:	06-04-10
Sample Matrix:	Soil	Date Extracted:	06-04-10
Preservative:		Date Analyzed:	06-07-10
Condition:	Intact		

Parameter	Analytical Result	Units
pH	7.12	su
Conductivity @ 25° C	3,860	umhos/cm
Calcium	430	mg/Kg
Magnesium	13.4	mg/Kg
Sodium	429	mg/Kg
Sodium Absorption Ratio (SAR)	5.54	ratio
Chloride	840	mg/Kg

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.

Comments: Rosa Road Line Leak


Analyst


Review



envirotech

Analytical Laboratory

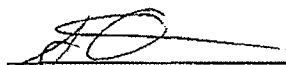
EC, SAR, pH Analysis

Client:	Williams	Project #:	04108-0136
Sample ID:	End of Spill	Date Reported:	06-08-10
Laboratory Number:	54583	Date Sampled:	06-03-10
Chain of Custody:	9411	Date Received:	06-04-10
Sample Matrix:	Soil	Date Extracted:	06-04-10
Preservative:		Date Analyzed:	06-07-10
Condition:	Intact		

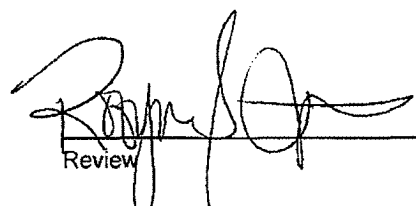
Parameter	Analytical Result	Units
pH	7.88	su
Conductivity @ 25° C	1,160	umhos/cm
Calcium	44.0	mg/Kg
Magnesium	<0.1	mg/Kg
Sodium	244	mg/Kg
Sodium Absorption Ratio (SAR)	10.1	ratio
Chloride	260	mg/Kg

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.

Comments: Rosa Road Line Leak



Analyst



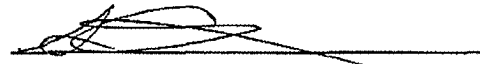
Review

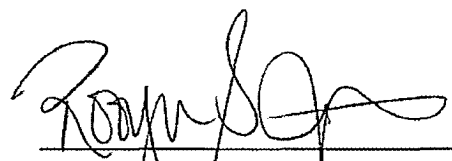
Client:	Williams	Project #:	04108-0136
Sample ID:	Culvert	Date Reported:	06-08-10
Laboratory Number:	54584	Date Sampled:	06-03-10
Chain of Custody:	9411	Date Received:	06-04-10
Sample Matrix:	Soil	Date Extracted:	06-04-10
Preservative:		Date Analyzed:	06-07-10
Condition:	Intact		

Parameter	Analytical Result	Units
pH	8.68	su
Conductivity @ 25° C	595	umhos/cm
Calcium	50.0	mg/Kg
Magnesium	<0.1	mg/Kg
Sodium	144	mg/Kg
Sodium Absorption Ratio (SAR)	5.60	ratio
Chloride	150	mg/Kg

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.

Comments: **Rosa Road Line Leak**


 Analyst

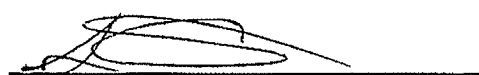
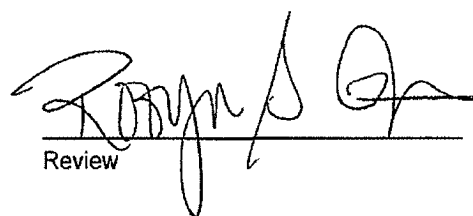

 Review

Client:	Williams	Project #:	04108-0136
Sample ID:	Clean	Date Reported:	06-08-10
Laboratory Number:	54585	Date Sampled:	06-03-10
Chain of Custody:	9411	Date Received:	06-04-10
Sample Matrix:	Soil	Date Extracted:	06-04-10
Preservative:		Date Analyzed:	06-07-10
Condition:	Intact		

Parameter	Analytical Result	Units
pH	7.89	su
Conductivity @ 25° C	53.9	umhos/cm
Calcium	28.0	mg/Kg
Magnesium	<0.1	mg/Kg
Sodium	11.3	mg/Kg
Sodium Absorption Ratio (SAR)	0.59	ratio
Chloride	10	mg/Kg

Reference: U.S.E.P.A., 600/4-79-020, "Methods for Chemical Analysis of Water and Wastes", 1983.

Comments: Rosa Road Line Leak


Analyst
Review



EPA Method 8270
Polynuclear Aromatic Hydrocarbons

Client:	Williams	Project #:	04108-0136
Sample ID:	Mid Pit of Spill	Date Reported:	06-13-10
Laboratory Number:	54582	Date Sampled:	06-03-10
Chain of custody:	9411	Date Received:	06-04-10
Sample Matrix:	Soil	Date Analyzed:	06-12-10
Preservative:		Date Concentrated:	06-08-10
Condition:	Intact	Analysis Requested:	8100

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Naphthalene	ND	0.01
Acenaphthylene	ND	0.01
Acenaphthene	ND	0.01
Fluorene	ND	0.01
Phenanthrene	ND	0.01
Anthracene	ND	0.01
Fluoranthene	ND	0.01
Pyrene	ND	0.01
Benzo[a]anthracene	ND	0.01
Chrysene	ND	0.01
Benzo(b)fluoranthene	ND	0.01
Benzo[k]fluoranthene	ND	0.01
Benzo(a)pyrene	ND	0.01
Indeno[1,2,3]pyrene	ND	0.01
Dibenzo[a,h]anthracene	ND	0.01
Benzo(g,h,i)perylene	ND	0.01

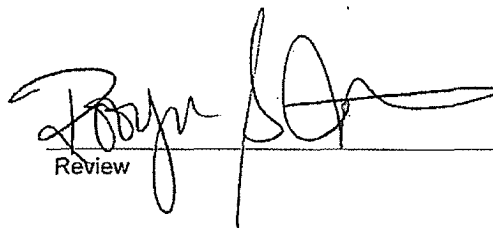
ND - Parameter not detected at the stated detection limit.

SURROGATE RECOVERY	Parameter	Percent Recovery
	1-fluoronaphthalene	87.9

References: Method 8270, Semi-Volatile Organics by Capillary Column GC/MS
SW-846, USEPA, September 1986.

Comments: Rosa Road Line Leak


Analyst


Review

Client:	Williams	Project #:	04108-0136
Sample ID:	End of Spill	Date Reported:	06-13-10
Laboratory Number:	54583	Date Sampled:	06-03-10
Chain of custody:	9411	Date Received:	06-04-10
Sample Matrix:	Soil	Date Analyzed:	06-12-10
Preservative:		Date Concentrated:	06-08-10
Condition:	Intact	Analysis Requested:	8100

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Naphthalene	ND	0.01
Acenaphthylene	ND	0.01
Acenaphthene	ND	0.01
Fluorene	ND	0.01
Phenanthrene	ND	0.01
Anthracene	ND	0.01
Fluoranthene	ND	0.01
Pyrene	ND	0.01
Benzo[a]anthracene	ND	0.01
Chrysene	ND	0.01
Benzo(b)fluoranthene	ND	0.01
Benzo[k]fluoranthene	ND	0.01
Benzo(a)pyrene	ND	0.01
Indeno[1,2,3]pyrene	ND	0.01
Dibenzo[a,h]anthracene	ND	0.01
Benzo(g,h,i)perylene	ND	0.01

ND - Parameter not detected at the stated detection limit.

SURROGATE RECOVERY	Parameter	Percent Recovery
	1-fluoronaphthalene	86.1

References: Method 8270, Semi-Volatile Organics by Capillary Column GC/MS
 SW-846, USEPA, September 1986.

Comments: Rosa Road Line Leak

Analyst

Review



EPA Method 8270
Polynuclear Aromatic Hydrocarbons

Client:	Williams	Project #:	04108-0136
Sample ID:	Culvert	Date Reported:	06-13-10
Laboratory Number:	54584	Date Sampled:	06-03-10
Chain of custody:	9411	Date Received:	06-04-10
Sample Matrix:	Soil	Date Analyzed:	06-12-10
Preservative:		Date Concentrated:	06-08-10
Condition:	Intact	Analysis Requested:	8100

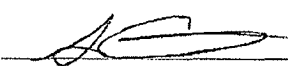
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Naphthalene	ND	0.01
Acenaphthylene	ND	0.01
Acenaphthene	ND	0.01
Fluorene	ND	0.01
Phenanthrene	ND	0.01
Anthracene	ND	0.01
Fluoranthene	ND	0.01
Pyrene	ND	0.01
Benzo[a]anthracene	ND	0.01
Chrysene	ND	0.01
Benzo(b)fluoranthene	ND	0.01
Benzo[k]fluoranthene	ND	0.01
Benzo(a)pyrene	ND	0.01
Indeno[1,2,3]pyrene	ND	0.01
Dibenzo[a,h]anthracene	ND	0.01
Benzo(g,h,i)perylene	ND	0.01

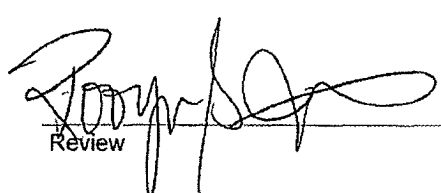
ND - Parameter not detected at the stated detection limit.

SURROGATE RECOVERY	Parameter	Percent Recovery
	1-fluoronaphthalene	96.7

References: Method 8270, Semi-Volatile Organics by Capillary Column GC/MS
SW-846, USEPA, September 1986.

Comments: Rosa Road Line Leak


Analyst


Review



EPA Method 8270
Polynuclear Aromatic Hydrocarbons

Client:	Williams	Project #:	04108-0136
Sample ID:	Clean	Date Reported:	06-13-10
Laboratory Number:	54585	Date Sampled:	06-03-10
Chain of custody:	9411	Date Received:	06-04-10
Sample Matrix:	Soil	Date Analyzed:	06-12-10
Preservative:		Date Concentrated:	06-08-10
Condition:	Intact	Analysis Requested:	8100

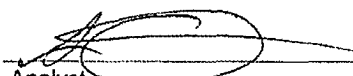
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Naphthalene	ND	0.01
Acenaphthylene	ND	0.01
Acenaphthene	ND	0.01
Fluorene	ND	0.01
Phenanthrene	ND	0.01
Anthracene	ND	0.01
Fluoranthene	ND	0.01
Pyrene	ND	0.01
Benzo[a]anthracene	ND	0.01
Chrysene	ND	0.01
Benzo(b)fluoranthene	ND	0.01
Benzo[k]fluoranthene	ND	0.01
Benzo(a)pyrene	ND	0.01
Indeno[1,2,3]pyrene	ND	0.01
Dibenzo[a,h]anthracene	ND	0.01
Benzo(g,h,i)perylene	ND	0.01

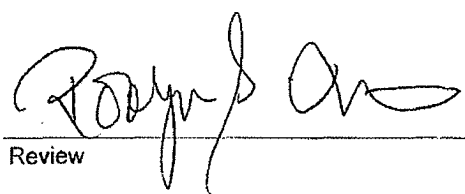
ND - Parameter not detected at the stated detection limit.

SURROGATE RECOVERY	Parameter	Percent Recovery
	1-fluoronaphthalene	100.0

References: Method 8270, Semi-Volatile Organics by Capillary Column GC/MS
SW-846, USEPA, September 1986.

Comments: Rosa Road Line Leak


Analyst


Review

**QUALITY ASSURANCE / QUALITY CONTROL
DOCUMENTATION**



EPA Method 8270
Polynuclear Aromatic Hydrocarbons
Quality Assurance Report

Client:	QA/QC	Project #:	QA/QC
Sample ID:	Method Blank	Date Reported:	06-13-10
Laboratory Number:	Blank	Date Sampled:	N/A
Sample Matrix:	Water	Date Received:	N/A
Preservative:	N/A	Date Analyzed:	06-12-10
Condition:	N/A	Analysis Requested:	8100

Parameter	Concentration (mg/L)	Det. Limit (mg/L)
Naphthalene	ND	0.01
Acenaphthylene	ND	0.01
Acenaphthene	ND	0.01
Fluorene	ND	0.01
Phenanthrene	ND	0.01
Anthracene	ND	0.01
Fluoranthene	ND	0.01
Pyrene	ND	0.01
Benzo[a]anthracene	ND	0.01
Chrysene	ND	0.01
Benzo(b)fluoranthene	ND	0.01
Benzo[k]fluoranthene	ND	0.01
Benzo(a)pyrene	ND	0.01
Indeno[1,2,3]pyrene	ND	0.01
Dibenzo[a,h]anthracene	ND	0.01
Benzo(g,h,i)perylene	ND	0.01

ND - Parameter not detected at the stated detection limit.

SURROGATE RECOVERY:	Parameter	Percent Recovery
	1-fluoronaphthalene	95.1

References: Method 8270, Semi-Volatile Organics by Capillary Column GC/MS
SW-846, USEPA, September 1986.

Comments: QA/QC for Samples 54364 and 54582-54585.

Analyst

Review



EPA Method 8270
Polynuclear Aromatic Hydrocarbons

Client:	QA/QC	Project #:	N/A
Sample ID:	Method Blank	Date Reported:	06-13-10
Laboratory Number:	0610MB.D QA/QC	Date Sampled:	N/A
Chain of custody:	N/A	Date Received:	N/A
Sample Matrix:	Water	Date Analyzed:	06-12-10
Preservative:	N/A	Date Concentrated:	06-04-10
Condition:	N/A	Analysis Requested:	8100

Parameter	Concentration (mg/L)	Det. Limit (mg/L)
Naphthalene	ND	0.02
Acenaphthylene	ND	0.02
Acenaphthene	ND	0.02
Fluorene	ND	0.02
Phenanthrene	ND	0.02
Anthracene	ND	0.02
Fluoranthene	ND	0.02
Pyrene	ND	0.02
Benzo[a]anthracene	ND	0.02
Chrysene	ND	0.02
Benzo(b)fluoranthene	ND	0.02
Benzo[k]fluoranthene	ND	0.02
Benzo(a)pyrene	ND	0.02
Indeno[1,2,3]pyrene	ND	0.02
Dibenzo[a,h]anthracene	ND	0.02
Benzo(g,h,i)perylene	ND	0.02

ND - Parameter not detected at the stated detection limit.

SURROGATE RECOVERY	Parameter	Percent Recovery
	1-fluoronaphthalene	91.5

References: Method 8270, Semi-Volatile Organics by Capillary Column GC/MS
SW-846, USEPA, September 1986.

Comments: QA/QC for Samples 54364 and 54582-54585.

Analyst

Review



EPA Method 8270
Polynuclear Aromatic Hydrocarbons
Daily Calibration Report

Client:	QA/QC	Project #:	N/A
Sample ID:	8100 Cal 200 ppm	Date Reported:	06-13-10
Laboratory Number:	0610P200 QA/QC	Date Sampled:	N/A
Chain of custody:	N/A	Date Received:	N/A
Sample Matrix:	Water	Date Analyzed:	06-12-10
Preservative:	N/A	Date Concentrated:	N/A
Condition:	N/A	Analysis Requested:	8100

Parameter	Concentration (mg/L)	Result	% Recovered	% Recovery Limits
Naphthalene	200	200	100	80 - 120
Acenaphthylene	200	200	100	80 - 120
Acenaphthene	200	200	100	80 - 120
Fluorene	200	200	100	80 - 120
Phenanthrene	200	200	99.9	80 - 120
Anthracene	200	226	113	80 - 120
Fluoranthene	200	183	91.3	80 - 120
Pyrene	200	200	100	80 - 120
Benzo[a]anthracene	200	200	99.8	80 - 120
Chrysene	200	200	99.9	80 - 120
Benzo(b)fluoranthene	200	199	99.3	80 - 120
Benzo[k]fluoranthene	200	208	104	80 - 120
Benzo(a)pyrene	200	199	100	80 - 120
Indeno[1,2,3]pyrene	200	188	94.0	80 - 120
Dibenzo[a,h]anthracene	200	172	86.1	80 - 120
Benzo(g,h,i)perylene	200	184	92.1	80 - 120

ND - Parameter not detected at the stated detection limit.

SURROGATE RECOVERY	Parameter	Percent Recovery
	1-fluoronaphthalene	100

References: Method 8270, Semi-Volatile Organics by Capillary Column GC/MS
SW-846, USEPA, September 1986.

Comments: QA/QC for Samples 54364 and 54582-54585.

Analyst

Review



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EPA Method 8270
Polynuclear Aromatic Hydrocarbons
Quality Assurance Report

Client: QA/QC
Sample ID: Matrix Duplicate
Laboratory Number: 54582
Sample Matrix: Soil
Analysis Requested: 8100
Condition: N/A

Project #: QA/QC
Date Reported: 06-13-10
Date Sampled: N/A
Date Received: N/A
Date Analyzed: 06-12-10

Parameter	Sample Result (mg/Kg)	Duplicate Sample Result (mg/Kg)	Det. Limit (mg/Kg)	Percent Difference
Naphthalene	ND	ND	0.01	0.0%
Acenaphthylene	ND	ND	0.01	0.0%
Acenaphthene	ND	ND	0.01	0.0%
Fluorene	ND	ND	0.01	0.0%
Phenanthrene	ND	ND	0.01	0.0%
Anthracene	ND	ND	0.01	0.0%
Fluoranthene	ND	ND	0.01	0.0%
Pyrene	ND	ND	0.01	0.0%
Benzo[a]anthracene	ND	ND	0.01	0.0%
Chrysene	ND	ND	0.01	0.0%
Benzo(b)fluoranthene	ND	ND	0.01	0.0%
Benzo[k]fluoranthene	ND	ND	0.01	0.0%
Benzo(a)pyrene	ND	ND	0.01	0.0%
Indeno[1,2,3]pyrene	ND	ND	0.01	0.0%
Dibenzo[a,h]anthracene	ND	ND	0.01	0.0%
Benzo(g,h,i)perylene	ND	ND	0.01	0.0%

ND - Parameter not detected at the stated detection limit.

References: Method 8270, Semi-Volatile Organics by Capillary Column GC/MS
SW-846, USEPA, September 1986.

Comments: QA/QC for Samples 54364 and 54582-54585.

Analyst

Review



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EPA Method 8270
Polynuclear Aromatic Hydrocarbons
Quality Assurance Report

Client:	QA/QC	Project #:	QA/QC
Sample ID:	Matrix Spike	Date Reported:	06-13-10
Laboratory Number:	54582	Date Sampled:	N/A
Sample Matrix:	Soil	Date Received:	N/A
Analysis Requested:	8100	Date Analyzed:	06-12-10
Condition:	N/A		

Parameter	Sample Result (mg/Kg)	Spike Added (mg/Kg)	Spiked Sample Result (mg/Kg)	Det. Limit (mg/Kg)	Percent Recovery	SW-846 % Rec. Accept. Range
Naphthalene	ND	100	109	0.01	109%	10-122
Acenaphthylene	ND	100	123	0.01	123%	10-139
Acenaphthene	ND	100	125	0.01	125%	10-124
Fluorene	ND	100	121	0.01	121%	10-142
Phenanthrene	ND	100	124	0.01	124%	10-155
Anthracene	ND	100	130	0.01	130%	10-126
Fluoranthene	ND	100	131	0.01	131%	14-123
Pyrene	ND	100	125	0.01	125%	10-140
Benzo[a]anthracene	ND	100	105	0.01	105%	10-116
Chrysene	ND	100	113	0.01	113%	12-135
Benzo(b)fluoranthene	ND	100	94.5	0.01	94.5%	10-199
Benzo[k]fluoranthene	ND	100	91.9	0.01	91.9%	10-150
Benzo(a)pyrene	ND	100	78.1	0.01	78.1%	10-159
Indeno[1,2,3]pyrene	ND	100	80.5	0.01	80.5%	10-128
Dibenzo[a,h]anthracene	ND	100	70.5	0.01	70.5%	10-110
Benzo(g,h,i)perylene	ND	100	90.8	0.01	90.8%	10-116

ND - Parameter not detected at the stated detection limit.

References: Method 8270, Semi-Volatile Organics by Capillary Column GC/MS
SW-846, USEPA, September 1986.

Comments: QA/QC for Samples 54364 and 54582-54585.

Analyst

Review

Walter

Walter



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Analytical Laboratory